



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,656	04/16/2004	Mohan Kalkunte	58268.00306	8497
32294 7590 09/10/2007 SQUIRE, SANDERS & DEMPSEY L.L.P. 14TH FLOOR 8000 TOWERS CRESCENT TYSONS CORNER, VA 22182			EXAMINER MAHMOUDZADEH, NIMA	
			ART UNIT 2609	PAPER NUMBER
			MAIL DATE 09/10/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/825,656	KALKUNTE ET AL.	
	Examiner	Art Unit	
	Nima Mahmoudzadeh	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-15 is/are allowed.
- 6) ☒ Claim(s) 1-8, 12, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 9-11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/16/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Callon et al. (US Patent No. 6,643,287)

Regarding claim 1, Callon et al. teach a method of distributing data across a network, the method comprising the steps of:

providing a distribution device (Column 1, line 62) configured to distribute packets (Column 1, lines 62-64) of data across a set of equal-cost paths (Column 1, lines 62-64) in the network; and

distributing the packets across the paths based on at least one attribute of each of the packets (Column 1, 64-67 and column 2, lines 1-3).

Regarding claim 2, Callon et al. teach the method of claim 1, wherein the distributing step comprises distributing the packets based on source addresses (Column 2, lines 1-3).

Regarding claim 3, Callon et al. teach the method of claim 1, wherein the distributing step comprises distributing the packets based on next-hop addresses (Column 1, lines 62-64).

Regarding claim 4, Callon et al. teach the method of claim 1, wherein the distributing step comprises performing a hashing function on the attribute (Column 1, lines 62-67 and column 2 lines 1-10).

Regarding claim 5, Callon et al. teach a method of distributing data across a network, the method comprising the steps of:

providing a distribution device (Column 1, line 62) configured to distribute a set of packets (Column 1, lines 62-64) of data across a set of equal-cost paths in the network (Column 1, lines 62-64); and

distributing each packet in the set of packets across the set of equal-cost paths according to a weighted distribution (column 2, lines 65-67 and column 3, lines 1-8).

Regarding claim 6, Callon et al. teach the method of claim 5, wherein the distributing step further comprises using a packet attribute from each packet to perform the weighted distribution (Column 3, lines 2- 4).

Regarding claim 7, Callon et al. teach the method of claim 6, wherein the distributing step comprises performing a hashing function on the packet attribute (Column 1, lines 62-67 and column 2, lines 1-10).

Regarding claim 8, Callon et al. teach the method of claim 5, wherein the distributing step comprises obtaining a match between a longest prefix in a first packet and a portion of a first set of instructions in a first compilation of sets of instructions (Part of the packet which is portion of the header compared to portion of routing table. Column 6, lines 59-65).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 2609

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Callon et al. (US Patent No. 6,643,287) in view of Ichinohe et al. (US Patent No. 7,243,258)

Regarding claim 12, Callon et al. teach the method of claim 5. Callon et al. teach fail to teach a method further comprising updating a compilation of sets of instructions used to perform the weighted distribution, wherein the compilation is updated based on a best-fit algorithm.

However, Ichinohe et al. teach the method further comprising updating (Column 15, lines 42-49) a compilation of sets of instructions (Column 15, line 43) used to perform the weighted distribution (Column 15, line 42), wherein the compilation is updated based on a best-fit algorithm (Column 15, lines 42-49).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify routing table management of Callon et al. to include routing update of Ichinohe et al. in order to update the routing table at specific time.

6. Claims 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinohe et al. (US Patent No. 7,243,258) in view of Callon et al. (US Patent No. 6,643,287).

Regarding claim 16, Ichinohe et al. teach a device for distributing Internet protocol packets across a network, the device comprising:

a set of interface (Fig. 1A, 13 and 14) means for interfacing the device with the network (Fig. 1A, N, M, and P); and

distribution means for distributing a set of packets entering the device through a first interface (Fig. 1A, 13 and 14) means in the set of interface (Fig. 1A, 13 and 14) means such that packets in the set of packets are distributed across all interface means in the set of interface.

Ichinohe et al. fail to teach the set of interface means operably connected to equal-cost paths according to a weighted distribution.

However, Callon et al. teach the set of interface means operably connected to equal-cost paths according to a weighted distribution (Column 1, lines 62-67 and column 2, lines 1-3).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify packet transmission of Ichinohe et al. to include equal-cost paths connection taught by Callon et al. in order to have an equal-cost paths according to a weighted distribution.

Regarding claim 17, Ichinohe et al. teach the device of claim 16. Ichinohe et al. fail to teach a device wherein the distribution means is configured to distribute the packets based on attributes of the packets.

However, Callon et al. teach the device of claim 16, wherein the distribution means is configured to distribute the packets based on attributes of the packets (Column 1, lines 18-24).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the packet frame of Ichinohe et al. to packet structure taught by Callon et al. in order to distribute the packets based on attributes of the packets.

Allowable Subject Matter

7. Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 13-15 are allowed.

9. The following is an examiner's statement of reasons for allowance: Ichinohe et al. (US Patent No. 7,243,258) teach a distribution system that includes two ports which may be connected at one end thereof to a transmitting and receiving unit and at the other end thereof to the networks respectively. The distribution system includes a management module and the routing module and these modules are connected to one another through a router bus. The management module possesses the function of

Art Unit: 2609

managing the states of the routing modules, the function of preparing the routing table in accordance with the routing protocol, the function of communicating with the router through the inter-apparatus communication bus, and the like. The routing modules possess the function of relaying an IP frame in accordance with the routing table prepared by the management module. The routing table includes relay route selection information, that is, routing information for dynamically determining among other routers a relay port of packet data received by the router constituting the inter-network apparatus. The routing modules include the ports and transmitting and receiving units for transmitting and receiving data, respectively. The inter-apparatus communication bus connects between the management module of the router and the management module of the router. The inter-apparatus communication bus constitutes a route for notifying failure information of the routing module detected by one router to the management module of the other router and a bypass route upon occurrence of failure. The management module includes, a management unit, a failure detection unit, a definition information memory unit, a routing module control unit, a routing protocol-processing unit, the routing table a failure notification receiving unit, a failure notification transmitting unit and a transmitting and receiving unit.

However, regarding claims 9-11, prior art of record fails to teach, or renders obvious, alone or in combination, a method for distributing comprising using a pointer portion from the first set of instructions to select a second set of instructions from a second compilation of sets of instructions, wherein the first set of instructions includes a first value that specifies how much weight is to be given to each equal-cost path in the

Art Unit: 2609

set of equal-cost paths in order to distribute data across the network as claimed in dependent claims 9-11 in combination with all limitations of the base claim and intervening claim.

Regarding claims 13-15, prior art of record fails to teach, or renders obvious, alone or in combination, a distribution device comprising: a set of ports, a first distribution unit, first lookup unit, the second lookup unit, and the third lookup unit as directly recited and detailed in independent claim 13.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Weaver (US Patent No. 6,574,669) teaches method and apparatus for routing traffic within a network utilizing linear optimization.

Ma (US Patent No. 7,123,620) teaches Apparatus and method for scalable and dynamic traffic engineering in a data communication network

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nima Mahmoudzadeh whose telephone number is (571)

Art Unit: 2609

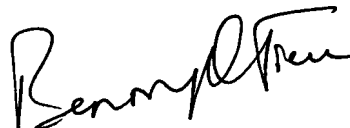
270-3527. The examiner can normally be reached on Monday - Friday 7:30am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Q. Tieu can be reached on (571) 272-7490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nima Mahmoudzadeh

AU 2609


BENNY Q. TIEU
SPE/TRAINER